

COLUMBIA FALLS REDUCTION PLANT
PRE-REVIEW ENVIRONMENTAL QUESTIONNAIRE

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The following pre-review questionnaire is designed to provide review team members, prior to the review, with basic information concerning the operation of the plant and its environmental protection systems.

The questionnaire consists of completed pages 15-32 of the Review Procedure Manual, including several continuation sheets, plus the following attachments:

1. Plant schematic.
2. Aluminum smelting - Process Description.
3. Fluoride emissions and basic dry scrubber operation.
4. Plant organizational chart.
5. Maintenance priority system.
6. Summary of environmental laws and regulations.
7. Contract terms and conditions.
8. 1981 1st quarter emission report.

ENVIRONMENTAL PROTECTION
SYSTEMS REVIEW PROGRAM

PRE-REVIEW QUESTIONNAIRE

The pre-review questionnaire is the first step toward review of your facility. It helps determine whether management systems are in effect which measure up to the Atlantic Richfield Company's Environmental Protection Policy and the ten criteria which define in more detail, the responsibilities of each manager.

This questionnaire is built around the ten criteria for evaluating management systems for environmental protection. Statements of each criteria appear within the questionnaire.

Information from the questionnaire will provide the review team with background information on your systems and on the degree your operations are influenced by environmental controls.

PRE-REVIEW QUESTIONNAIRE

CRITERION I. POLICY

Managers and supervisors know and apply Atlantic Richfield Environmental Protection policy.

The criteria developed for evaluating effective management systems are based on the corporate environmental protection policy. Systems developed to implement the criteria must be predicated on the knowledge, acceptance and application of the policy. Operating companies and individual facilities may have complementary policies, but these must embrace the intent and spirit of the corporate policy.

- A. What steps have been taken to familiarize managers and supervisors with the statement of Atlantic Richfield Environmental Protection policy?

In January 1980, copies of the policy were mailed to all employees. During regularly scheduled Safety/Environmental Meetings, copies have been given to employees, and the policy discussed. During their orientation, new employees are provided with a copy of the policy followed by a discussion of major policy items.

- B. Briefly state a few of the actions taken by management at this facility within the past year which illustrate how one or more of the specific points in the policy statement are carried out.
1. Through the efforts of plant personnel, a state law was passed and a state legislative resolution was promulgated. Both of these provided needed changes in environmental regulations such that the plant is able to comply with state standards.
 2. Permits to install dust control systems, meeting the criteria of best available technology, have been applied for and approved.
 3. Communications with state officials responsible for adopting environmental regulations have been enhanced by inviting these people to the plant and familiarizing them with operations and environmental control systems.
 4. Recognized experts in the field of groundwater hydrology have been consulted on a routine basis to aid in securing ecological guidance.
 5. New employee training programs which include environmental matters, have been initiated.
 6. An expert in the field of botany has been retained on a long-term contract to study the effects of fluoride on vegetation around the plant.

CRITERION II - REGULATIONS

Facility personnel know and comply with applicable federal, state, and local environmental regulations.

One of the major policy statements requires compliance with environmental legislation. Compliance is a mandatory requisite for maintaining the credibility of the company. Up-to-date copies of environmental laws, regulations and permits affecting the facility must be readily available. There should be a system to obtain them and disseminate the essential information to responsible management.

A. What regulations and permits govern the activities of your facility?

See attached page for list of permits.

A summary of environmental regulations is attached to this questionnaire.

B. Describe systems in effect to:

1. Make supervisors aware of applicable regulations.

The Environmental Department distributes summaries of the regulations to managers who further distribute them to appropriate personnel.

2. Detect Violation.

The Environmental Department routinely monitors environmental control systems. The results of such monitoring efforts are routinely sent to state regulatory agencies when required by state standards. See attachment for quarterly emission report. Regulatory agencies make periodic inspections of the plant.

3. Bring violations into compliance.

Upon detection of violations, the Environmental Department makes appropriate recommendations to management for bringing the violation into compliance.

- C. Have there been environmental inspections within the past 12 months by federal, state, or local inspectors?

The Region VIII EPA and State Solid Waste Management Bureau conducted an inspection of the hazardous waste facilities on August 25, 1981. A report on the inspection has not yet been received.

- D. Attach copies of citations or commendations received within the past 12 months.

No citations or commendations have been received within the past 12 months.

CRITERION II - QUESTION A (Continuation Sheet)

<u>State/ Federal</u>	<u>Statute</u>	<u>Permit</u>	<u>Reviewing Agency</u>
Federal	Resource Conservation and Recovery Act (RCRA)	Hazardous Waste Management Facilities	EPA
Federal	Clean Water Act	Spill Prevention Control and Countermeasure Plan (SPCC)	EPA
Federal	Not Applicable	Special Use	Department of Interior National Park Service
Federal	Not Applicable	Special Use	Department of Agriculture Forest Service
State	Montana Clean Air Act	Air Quality: Construct/Operate Air Contaminant Source	MDHES - Air Quality Bureau
State	Montana Radiation Control	Operate Radiation Machine	MDHES - Occupational Health Bureau
State	Montana Water Law	Well Water Use	Department of Natural Resources
Federal	Clean Air Act	PSD	EPA

CRITERION III - OPERATING PROCEDURES

Facility has written operating procedures which include emission and effluent limitations. Provides for self-monitoring.

Because of the technical nature of operations, most facilities utilize operating manuals delineating specific operating procedures. Inherent in many of the procedures are precautions to protect the environment. Whenever possible and appropriate, the procedures should incorporate emission and effluent limitations required by operating permits and other regulations. Rules common to all operations including waste treatment and disposal can be incorporated in a general environmental protection rules book. Compliance with applicable laws, regulations and permits should be demonstrated through a documented self-monitoring system.

A. Complete following Table: Check column if yes.

Major Operations (Include major operating processes and pollution control processes)	Are operating procedures written?	Do procedures explain environmental safeguards and note emission limitations?	Is there self- monitoring to ensure compliance?
General Cell Operations	X	X	X
Dry Scrubber	X	X	X
Baghouse Operations	X	X	X
Unloading Stations	X	X	
Solid and Hazardous Waste Disposal	X	X	X
Paste Plant	X	X	X
Sewage Treatment Plant			X
Rectifier	X		
Casting Operations			

CRITERION IV: TRAINING - MOTIVATION

Employees are trained to work in an environmentally acceptable manner.
Management motivates employees to be concerned about the environment.

Each facility should have a program to provide environmental training for employees. It should facilitate participation and provide information as well as include specific instruction. New regulations, new employees and new assignments promote the need for an on-going training program. The system should be formally structured, and documentation is necessary for its effective management. Any program fails if the participants do not believe that it is necessary and vital to achieve acceptable performance. The form and character of the system used to provide motivation are neither specific nor universal. The system is dependent upon the style of management and circumstances that prevail, and may include award programs, posters, recognition events, contests, emission reduction goals, performance appraisal, discipline, incident reduction goals, positive management response to suggestions, letters of recognition or commendation, etc. However, environmental performance will demonstrate whether the necessary motivation system has been provided.

A. Complete the following tables.

B. Describe incentive programs (such as; awards for public awareness, ingenuity in operations, environmental group activities, pollution control recommendations, etc.) Describe employee groups or individuals involved in environmental jobs and/or voluntary activities. Indicate those activities that are in-plants, community, trade associations, or other.

The incentive program is of an informational nature:

1. Weekly emission results for each of the ten potrooms is posted, and on a monthly basis, "Leading Lines" for emission reduction is published.
2. Various motivational type signs are posted throughout the plant.
3. A weekly publication is distributed throughout the plant, Sebree Reduction Plant, Corporate Offices and the Harvey Technical Center. Included in the publication are the emission results.
4. An attempt was made in 1979 to make monetary awards, but were discontinued as a result of hard feelings among union personnel.

D. Describe your system that assures proper recognition and handling of environmental complaints, comments, citations, commendations, etc.

During Safety/Environmental Meetings employees are informed that their concerns and questions will be addressed and answered by either their supervisor or the Environmental Department.

A citation would normally be handled by the affected department, Engineering and the Environmental Department. The cause of the problem would be identified and the situation corrected by a combination of effort on the part of the appropriate departments.

CRITERION IV: TRAINING - MOTIVATION

Critical Occupational Groups - For this purpose, critical occupational groups include all skilled and semi-skilled (but not professional) occupational groups at the facility, such as craftsmen, technicians, process operators, and heavy equipment operators.

A	B	C (1)	C (2)	D
Critical occupational groups at facility	Are environmental meetings conducted? Frequency?	Indicate type of job training utilized (formal, on-the-job, other)	Is environmental training included as part of overall job training?	Is retraining conducted on a scheduled basis or only when deficiencies are noted?
General Reduction Department Operations	Yes Monthly	Formal & OJT	Yes	Retraining is conducted as
Pot Technicians 34	Yes Monthly	Formal & OJT	Yes	needed. For instance, if
Ma Maintenance Craftsmen	Yes Monthly	Formal & OJT	Yes	unusual problems occur in
Service Dept. Operators	Yes Monthly	Formal & OJT	Yes	an operation, retraining
Environmental Control 12	Yes Monthly	Formal & OJT	Yes	may be conducted as part of
Paste Plant Operators 8	Yes Monthly	OJT	Yes	the effort in providing solutions.
Casting Dept. Operators	Yes Monthly	OJT	No	
Rectifier Operators	Yes Monthly	Formal & OJT	Yes	

Example:

Pumper

Yes

Annually

On-the-job

Yes

No

CRITERION IV: TRAINING - MOTIVATION

Major Operations - The principal operating units or groups of units at the facility such as crude processing, drilling operations, pot lines, loading facilities, rolling mills, etc.

Major Operations	Check () column if formal environmental training sessions are conducted relative to each major operation. Show a "D" if practice drills are conducted. Indicate frequency of sessions.		
	Operating Procedures	Startup/Shutdown Procedures	Auxiliary Equipment Operating Procedures
General Cell Operations	X	X	X
Dry Scrubber	D-W	X	X
Baghouse Operations			N/A
Unloading Station		N/A	N/A
Solid and Hazardous Waste Disposal	X	N/A	N/A
Paste Plant			N/A
Sewage Treatment Plant			N/A

Rectifier

Casting Operations

The need to conduct formal environmental training sessions has been identified for several occupational groups within the major operations, and such training has been and is being conducted. It has been determined that in all other areas of plant operations, OJT is an adequate training device.

Salaried personnel generally receive annual training sessions. Hourly personnel are trained upon beginning employment and retrained as necessary.

Example

#208 Crude Unit

D-6 Mo.

Annually

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CRITERION V: ENVIRONMENTAL EMERGENCIES

Proficient personnel are available during all operations to carry out up-to-date environmental protection emergency procedures.

It is important that all emergency environmental procedures plans be documented in a clear concise manner. Examples of these include spill prevention, containment and countermeasure plans, contingency plans, emergency episode plans, plans covering hazardous material spills, plans which cover accidental discharges to the environment as a result of an operation upset and/or bypass or turnarounds. These plans should be updated to reflect changes in operational procedures and personnel. Equally important to having such written plans is a system requiring periodic drills and training in order to insure personnel familiarity with the plan.

Please complete Table.

Emergency Environmental Procedures as a consequence of:	Check () if Written Procedure is in Effect. If Practice Drills are Conducted, Show a "D" Also.	Show Approximate Frequency of Drills. If Drills are Conducted, but Not on a Regular Schedule, Show When Drill Was Last Conducted.	Has Procedure Been Practiced on All Shifts Within Past 12 Months? (Indicate YES or NO).
Fire/Explosion	X	--	No
Transportation Accident		--	No
Oil Spill		--	No
Hazardous Material Spill		--	No
Natural Disaster	X*	D Weekly	Yes
Upset/Bypass Discharges	X*	D Weekly	Yes
Emergency Air Episode	X*	D Weekly	Yes
Others:			

*The Written Procedure is for the dry scrubber operation only.
This system is the only primary pollution control system that could be affected by an emergency situation.

Example: Oil Spill

Once per year

D

Yes

CRITERION VI. INCIDENT -- FOLLOW-UP

Prompt and effective steps are taken to study and avoid recurrence of serious incidents.

When environmental incidents such as oil spills, excess emissions or unusual discharges occur, written reports should be prepared. These reports should be made for incidents even though not required by law. Documentation should include any citations and/or legal actions which ensue. The reports should be maintained in such a manner to allow easy access for review. A management system should provide review of these incidents by responsible facility personnel with the objective of preventing future incidents.

- A. Complete the following table.
- B. Attach copies of incident reports for serious incidents that have occurred within the past 24 months.

No serious incidents have occurred at this plant in the past 24 months. Also, no fines or citations have been received.

CRITERION VI. INCIDENT -- FOLLOW-UP

Serious Incident. For this purpose, serious environmental incidents are those which were (a) reported to a government agency, (b) resulted in a citation, (c) legal action, or (d) entailed total costs in excess of \$10,000.

Serious Incidents within the past 24 months (Indicate date & Location of occurrence)	Was a written incident report prepared? (yes or no)	Date of Report	Have steps been taken to prevent recurrence? (yes or no)	Were corrective steps applied also to similar conditions? (yes or no) (if "yes" please state where)
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See Criterion VI - B.

CRITERION VII - ENVIRONMENTAL PROTECTION INFORMATION

Effective systems provide for gathering and distribution of current environmental protection information and applying it to existing and new operations.

A system for the distribution of environmental information should be maintained between the operating company's environmental staff and each of its facilities and internally within each facility. This information should include government regulations as well as up-to-date environmental and technological information. In the design of new facilities and continued operation or modification of existing facilities, this information is critical and should be systematically reviewed.

- A. Describe the system for the distribution of environmental information between your Company environmental staff and your facility?

The Corporate environmental staff in Louisville routinely sends environmental information to the plant management. Laws and regulations are summarized in cover letters pointing out areas of concern.

- B. Describe the system to disseminate environmental information to responsible personnel within your facility?

The Environmental Department has access to pertinent information through government registers, BNA, numerous trade journals, the Arco Scan system, and the Corporate environmental staff. The Environmental Department distributes summaries of pertinent laws, regulations and other material to management.

When requested, Environmental Department personnel attend monthly Safety/Environmental Meetings in order to distribute information, explain systems or procedures, answer questions or address employee concerns.

The Environmental Department publishes a weekly emission report that is widely distributed in the plant. This tells each Potline how they are performing in comparison to the state standard. Our people, both hourly and salaried, feel this is a valuable environmental protection tool.

CRITERION VII. ENVIRONMENTAL PROTECTION INFORMATION. (CONT'D)

- C. During design of major new facilities or modification of existing facilities, what system is used to identify potential environmental impacts and allow consideration of the best available Environmental Protection technology. Indicate systems for design work conducted at the facility and for design work conducted outside the facility.

Design work or modification of any environmental control system, and of any new or existing facility that could conceivably impact the environment is routed through the Environmental Department. Here, appropriate input is provided, ranging from obtaining basic background information to obtaining permits allowing such construction or modification.

On some occasions, the Corporate environmental staff in Louisville provides expertise needed in acquiring background data.

The same system is used in design work conducted outside the facility.

- D. List major projects* that are (1) now being designed, (2) are under construction, and (3) have been completed within the past 12 months. Underline the project title where the system described above has been followed.

(1)	(2)	(3)
<u>Cast House</u>	<u>Hazardous Waste Landfill</u>	<u>Employee Relations Office</u>
<u>Warehouse Bulk</u>	<u>Expansion</u>	<u>Change House Expansion</u>
<u>Storage Building</u>	<u>Sanitary Landfill</u>	<u>Site Work/Plant Facilities</u>
<u>Replace Process</u>	<u>Paste Plant Scales</u>	<u>Improvement</u>
<u>Computer</u>	<u>ECL Stud-Pulling Machine</u>	<u>Garage Expansion</u>
	<u>Ingot Saw and Conveyor</u>	<u>Power Factor Improvement</u>
	<u>Modify Regulator Tap</u>	<u>Railroad Renovation</u>
	<u>Changer #3</u>	<u>Pitch Tank</u>
	<u>Field Maintenance Facilities-</u>	<u>Administrative Office</u>
	<u>Shed 2 and Shed 19</u>	<u>Remodeling</u>
	<u>Sumitomo</u>	<u>EPA Sampling Manifold</u>

*Major projects listed are projects with a capital cost of at least \$200,000.

CRITERION VIII - MAINTENANCE

Controlled maintenance systems provide prompt and effective corrective action of potential deficiencies or non-compliance.

Controlled maintenance systems, both preventive and corrective, can minimize real or potential environmental effects. Examples of these include maintenance of valves, fittings, emission or level controls and pumps. Such maintenance will minimize fugitive emissions, spills and upsets.

- A. Describe preventive maintenance systems that ensure the effective operation of environmental control facilities such as wastewater treatment or bag houses.

The Columbia Falls plant has in place a PM system which effectively deals with environmental controls. The PM system centers around regularly scheduled inspections of control equipment. Inspections are conducted by trained maintenance personnel using standardized inspection forms for each piece of equipment. Operating personnel also conduct inspections.

- B. Describe corrective maintenance systems that ensure that small leaks or problems are handled promptly.

When a PM inspection or operating problems reveals that equipment is in need of repair, personnel from the Maintenance Department are assigned to the problem on a priority basis. Malfunctions of environmental control equipment that could result in violation of regulations or standards receive top priority.

CRITERION VIII - MAINTENANCE (CONT'D)

- C. Describe systems for assuring priority for work orders with environmental importance (either compliance or good housekeeping).

Planned maintenance requires operating or maintenance personnel to assign priority numbers to equipment in need of repair. Attached is the Maintenance Priority System.

CRITERION IX - THIRD PARTY ACTIONS

Third party contractors perform in an environmentally sound manner under the supervision of a knowledgeable contract administrator.

Activities of others working for, with, or on behalf of Atlantic Richfield Company are important. The actions of these third parties may reflect upon Atlantic Richfield or may be our responsibility. Whether it be a drilling contractor, a construction/maintenance/spill cleanup contractor, a chartered tanker, a contract carrier or a waste hauler, the third party should be aware of Atlantic Richfield's environmental procedures and concerns and to the possible, be required to follow them. Reputable third parties should be chosen and their activities supervised with consideration for environmental consequences.

- A. Describe systems to require that contractors and subcontractors know and comply with ARCO environmental procedures and governmental regulations; attach copies of typical contract language.

Contract language requires contractors to comply with all applicable federal, state and local laws and regulations. (See attached copy of typical contract.) At this time, the contract does not address compliance with Arco environmental policies and procedures. The Corporate legal staff, which sets forth contract language, is in the process of addressing this situation.

- B. Describe systems for monitoring contractor and sub-contractor environmental performance.

The Anaconda construction supervisor informs the Environmental Department that a contract has been let, and the nature, duration and scope of work to be performed. The Environmental Department determines whether the project could have any conceivable impact on the environment. If so, the contractor is informed of applicable laws, regulations and Anaconda environmental policies and procedures to which must be adhered, and specific actions which should be taken in order to preclude possible impact.

- C. Complete the following table listing principal third party contractors for physical services (e.g. construction, maintenance, tank cleaning, carriers, seismic, drilling, etc.)

CRITERION IX: THIRD PARTY ACTIONS

Principal Contractors for Physical Services

Contractor	Purpose	Was contractor's past performance a consideration in the selection process?	Was contractor advised of ARCO environmental policy and procedures and government regulations?	How is contractor's environmental performance monitored?
			(1)	(2)
E.F. Matelich Construction		Yes		
4-G's Plumbing Construction		Yes	(1) Contractors were not advised of	
Lyford Plumbing Construction		Yes	Arco policy but were required to	
Miller-Ford Electric Construction		Yes	adhere to applicable government	
Kalispell Electric Construction		Yes	regulations.	
American Asphalt Construction		Yes		
Pack Concrete Construction		Yes	(2) See Criterion IV - Third Party	
Grover Pipe Construction		Yes	Actions, Question B.	
Root Masonry Construction		Yes		
Ureco Excavating Construction		Yes	Yes	
Reynolds Excavating Construction		Yes	Yes	
Anderson Masonry Construction		Yes		
Weber Drilling - Well Drilling		Yes		
Torgerson Construction - Recycling		Yes		
Stewart & James Construction		Yes		

CRITERION X - EXTERNAL COMMUNICATION

Established systems provide effective communication with government and the public.

The facility should have a system to assist in the development of cost-effective, sound laws, codes, rules and regulations. This can be accomplished by sending comments through operating company environmental staff personnel, by appearing at local hearings and by informing the public of our efforts. A system for communicating with the public, including environmental and conservation groups, should provide for availability of speakers, exhibits and other public relations methods of conveying to the public our concern for environmental protection.

A. Describe the systems and personnel involved that interface with government regarding environmental issues.

1. International

The occasions for Columbia Falls personnel to interface with international governments regarding environmental issues are nil.

2. Federal

The Plant Manager, Governmental Affairs Manager, and the Technical Operations Manager have periodic contact with the Montana Congressional delegation to discuss environmental issues. (See attached sheet for continuation.)

3. State

On the state level, we work closely with our ARCO Public Affairs Office in Helena. Two plant people, the Governmental Affairs Manager and the Technical Operations Manager, are registered lobbyists. (See attached sheet for continuation.)

4. Local

We also have frequent contact with the local County Commissioners, Mayors, and others involved in local government.

B. Describe briefly the system and personnel involved that are utilized in communicating with the public at large including governmental groups.

The Plant Manager and the Governmental Affairs Manager are frequently in contact with all local news media. They know if they have inquiries concerning plant activities a quick response will be provided. The Columbia Falls newspaper devotes one full page each month to plant functions, including environmental matters. When items of major impact occur, the Governmental Affairs Manager works with the appropriate Corporate people to develop news releases and these are distributed in such a manner as to gain the desired coverage.

The Plant Manager and other selected personnel respond to requests for speakers from various public interest groups. The talks are tailored to the subject requested and as often as not, environmental matters are involved.

We feel we have a good environmental record and welcome opportunities to talk about it.

(CONTINUATION SHEET)

CRITERION X - EXTERNAL COMMUNICATION

- A. Describe the systems and personnel involved that interface with government regarding environmental issues.

2. Federal (Cont.)

The last instance was in August 1981 when Senator John Melcher, D - Montana, visited the plant and was given a comprehensive rundown on our environmental situation. He remarked that the plant looked very, very good. Congressman Pat Williams, D - Montana, was also in the community in August and was briefed on environmental matters. We have a friendly relationship with both of these men, as well as Senator Max Baucus, D - Montana, and communication with them is no problem.

We also keep our Washington, D.C. Public Affairs Office apprised of any contact with the Congressional delegation.

3. State (Cont.)

With the cooperation of the Plant Manager, the Helena office, Company environmental personnel and Union officers, we were able to have passed in the last Legislative Session two major environmental bills relating to the Columbia Falls plant.

We have had contact with the Governor on several occasions relative to environmental issues and all local state representatives are routinely informed about such matters.

The Technical Operations Manager, his staff, the Plant Manager and on certain occasions, the Governmental Affairs Manager, have close contact with the State Department of Health and Environmental Sciences and the Board of Health. We have appeared at numerous public hearings before the Board and members of the Board and Department have visited the plant several times. The last visit was in August of 1981.